CONRAD GESNER

A QUATERCENTENARY EXHIBIT

NATIONAL LIBRARY OF MEDICINE
Bethesda, Maryland

CONRAD GESNER

Physician, Scholar, Scientist

1516–1565

A quatercentenary exhibit

held November–December 1965

in the

National Library of Medicine

Bethesda, Maryland

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INTRODUCTION

Conrad Gesner, who died 400 years ago, was a many-sided genius, typical of his day and age perhaps, but rare in our own. Today, when the rapid advance of science has led to increasing specialization, it is refreshing to recall a period when it was possible for one man to master many disciplines. A physician whose life was plagued by poverty and chronic ill health, Conrad Gesner nevertheless managed to make important contributions to botany, zoology, bibliography and philology. To his contemporaries, he was best known as a botanist, and indeed from adolescence this was his favorite pursuit. His letters teem with allusions to his botanical garden, to his field trips, to his or his friends' collections, to suggested exchanges of specimens. He was not however destined to complete the *magnum opus* which would have rendered his position as botanist secure. The *Historia stirpium* on which he was intermittently engaged for twenty years remained unfinished at his untimely death at the age of 49. His botanical manuscripts were not to be published for another 200 years.

Fortunately, he lived to see the first four volumes of his imposing *Historia animalium* published (1551-1558). The fifth volume (on snakes) was issued posthumously in 1587. The entire work can be considered as the starting point of modern zoology. In bibliography, he was a pioneer: his *Bibliotheca universalis* (1545) is an exhaustive catalogue of the Greek, Latin, and Hebrew literature published in the first century of printing. Competent later bibliographers (Ebert, Petzholdt, Brunet) have considered the *Bibliotheca* "one of the greatest accomplishments of any one man in the sixteenth century" (Bay (1916) p. 68). Gesner's competence as a philologist, though less spectacular, is evidenced by a multitude of critical editions and translations of such diverse authors as Aelian, Galen, Martial, Michael of Ephesus and Porphyry, while his wide acquaintance with the Greek texts of Aristotle and his Greek commentators lends distinction to the posthumously published *Meditationum ... libri V* (1586). Gesner's interest in local dialects and the modern vernaculars shows itself in his *Mithridates de differentiis linguarum* (1555). This is an account of about 130 known languages, and prints the *Pater noster* in 22 different tongues. The work was praised by the famous nineteenth-century philologist Jakob Grimm (1785-1863), who like Gesner combined a passion for philology with a taste and aptitude for botany.

Gesner's very real achievements seem all the more extraordinary when we recall the slenderness of his financial resources, his indifferent health and the persistent claims on his time and money made by a steadily increasing crowd of family dependents. In a letter to his friend Cosmas Holzach written in 1560, Gesner complains of a host of distractions: his daily lectures on Aristotle (he drew an official salary as lecturer in Zürich's *Carolinum),* certain literary effusions (presumably the *de rigeur* complimentary verses and such like demanded of all literary figures), his patients and his voluminous correspondence, all made serious inroads on his time. He mentions the hindrance of ill health and family preoccupations in another letter to his botanist rival Melchior Guilandinus (Wieland). His medical practice nevertheless appears to have been relatively modest, though as city physician with a public stipend from 1554 onwards he was obliged to treat such patients as he had *gratis.* The demands made by correspondence appear to have been more real: the posthumously published *Letters* reveal an astonishing industry. Written to a vast circle of friends and acquaintances, they provide a vivid picture of Gesner as counsellor, colleague and friend. He was always ready with advice, and constantly inspiring others in their researches or soliciting their support for his own. His hospitality is equally well attested. The National Library of Medicine is fortunate in having recently acquired a little book which allows us a glimpse of the many individuals who were Gesner's guests. This, the *Liber amicorum* or "Book of Friends" contains over 200 autographs of physicians, scientists, and scholars who travelled to Zürich to see the great man.

A reading of the *Letters* and the *Liber* leaves one in no doubt of the warmth of Gesner's personality or of the high tone of his dealings with colleagues and co-workers in all fields. In a century too often marked by acrimonious debate, he deliberately avoided antagonizing his professional rivals. Typically, he once wrote to his great friend Jean Bauhin: "philosophy itself, and even more religion teaches us to eschew idle controversy and polemic." Always himself scrupulous in acknowledging his debts, he commented unfavorably on prevailing scientific ethics: "there are very many men so ambitious and ungrateful, they claim for themselves what was owed to others." Far from discouraging competition, he positively welcomed it, as we learn from his letter to Leonhard Fuchs. The latter, contemplating a three-volume botanical work, and aware of Gesner's impending *Historia stirpium,* wrote to Gesner suggesting he drop his project. Politely but firmly Gesner refused: "We should think more of the public profit than our own," he wrote, and pointed out the

impossibility of any one man being able to master the whole field. "But if everyone publishes his observations for the public good, it is to be hoped that from them all one day one perfect work may be achieved . . . but this, I feel, will not be realized in our century." A firm belief in the possibility of progress itself helps to make progress possible. Gesner, an optimist, inspired others to add to the sum of human knowledge so painfully and slowly acquired through the centuries.

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BRIEF LIFE OF CONRAD GESNER, 1516–1565

Born in Zürich 26 March 1516, the son of Urs and Agathe Gesner (née Frick), Gesner was partly brought up by his uncle on his mother's side Johannes Frick and partly by one of his teachers, Johann Jakob Ammann. Gesner's father, a furrier, could not himself support the full cost of his promising son's education; he worked hard, but was poor and had a large family. When Gesner was only 15, he lost his father at the battle of Kappel (1531). His widowed mother could not keep him at home and Gesner was forced for a few months to enter the service of Wolfgang Capito at Strassburg. Returning to Zürich, he was shortly sent at the city's expense to France, to complete his education. He traveled to Bourges in 1533 in the company of Johann Frisius (Friess) who was to remain his lifelong friend. As the city bursary proved too small to meet his expenses, Gesner had to supplement it by teaching. He remained in Bourges for a year, then traveled to Paris hoping to profit from the distinguished teaching there. He was disappointed, not so much through the fault of the university as from his own immaturity; he read too much, too haphazardly. Bitterly he wrote in his *Bibliotheca universalis* of the shortsightedness of city authorities who to save money sent adolescents abroad without pedagogues to direct their studies. After a year in Paris, he returned to Strassburg but was recalled to Zürich. There, he made a hasty marriage at the age of 19. The girl was ill-educated, suffered from ill health, and was a poor housekeeper. For a while, Gesner eked out a miserable existence teaching the rudiments of Greek and Latin grammar. In his spare time, he read medical authors. While at Basel studying medicine in 1537, he was called to the chair of Greek at Lausanne. Here life was pleasant, his salary good and his colleagues friendly. When not teaching, Gesner attended the lectures of the Professor of Hebrew Imbert Pacolet, botanized, and edited his first works for eventual publication after he had left Lausanne. He relinquished his post in summer 1540, when he traveled to Montpellier. There he had hoped to become a house pupil of one of the distinguished professors of medicine, thinking he could learn more from daily contact with a good physician than from attendance at lectures. However, he found no one who would take him in and left after a few months, traveling back to Zürich via Lyons with Leonhard Rauwolff, who was to become famous later as a botanist. The time in Montpellier had not been wasted; Gesner had perfected his knowledge of botany and anatomy, and he had made some valuable friends, not least the eminent naturalist, Guillaume Rondelet. In February 1541 he was studying medicine at Basel where he

heard the lectures of Alban Thorer and Sebastian Singkeler. Within a very short time, he had obtained his doctorate after a public disputation, and returned proudly to Zürich. He was then 25.

Here, apart from regular field trips, Alpine excursions, and visits to various cities such as Augsburg, Strassburg, Stuttgart, Tübingen and Venice, he stayed the remaining 24 years of his life. He had an official post as lecturer on Aristotelian physics at the Carolinum; from 1554 on he was city-physician; from 1558 on, he had the title and income of a Canon. Although never well off, he resisted tempting offers of posts elsewhere. The highlights of this final period were the *Bibliotheca universalis*, begun when its author was only 25, and the *Historia animalium*. Towards the end of his life, as his letters show, he was increasingly aware he had not long to live. Plague, a constant menace, claimed him in December 1565. He showed the first symptoms on the 9th and died on the night of the 13th, having in the interim put all his affairs in order. He appointed Caspar Wolff his literary executor; sold him his library at a fair price; drew up an inventory of his published and unpublished writings (the latter a veritable chaos of papers); and explained his designs for the unfinished History of Plants. At his own wish, he was finally carried into his "museum" where he died at eleven o'clock, surrounded by his collections of "natural curiosities".

I. THE BIBLIOGRAPHER

1. Bibliotheca universalis, sive catalogus omnium scriptorum locupletissimus, in tribus linguis, Latina, Graeca, & Hebraica . . . Zürich, 1545.

   An alphabetical listing of all the books published in Latin, Greek and Hebrew during the first century of printing, arranged by authors' forenames, with a reverse index of surnames. Gesner began this volume, which has earned him the title of "father of bibliography," when he was only 25. It includes his own bio-bibliography.

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2. Pandectarum sive partitionum universalium . . . libri XXI. Zürich, 1548.

   The *Pandects* are a classified rearrangement of the contents of the *Bibliotheca.* Theology forms one third of the whole: the next in size is Natural Philosophy, subdivided into twelve sections. Shown here is section eleven on zoology.

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3. Epitome bibliothecae Conradi Gesneri, conscripta primum a Conrado Lycosthene Rubeaquensi: nunc denuo recognita & . . . locupletata per Josiam Simlerum Tigurinum . . . Zürich, 1555.

   An abridged version of the great *Bibliotheca* of 1545, with the addition of more than 2,000 authors. Much of the new material was supplied by Gesner's correspondents. The book was edited by Simmler, since Gesner was too occupied by his *Historia animalium* to supervise the publication himself.

4. Bibliotheca instituta et collecta primum a Conrado Gesnero, deinde in Epitomen redacta & . . . aucta per Josiam Simlerum Tigurinum . . . Zürich, 1574.

A very much enlarged edition of the *Epitome,* the *Bibliotheca* includes the voluminous literature published since 1555. The entry on Gesner himself occupies 13-1/2 columns and is largely reprinted from his auto-bibliography of 1562. Newly added are details of Gesner's posthumous publications, and of unpublished manuscripts in the hands of his executor.

5. CHIRURGIA. De chirurgia scriptores optimi . . . Zürich, 1555.

   To this collection of surgical texts, Gesner contributed bio-bibliographical notes on some 110 surgeons and surgical writers. Shown here is part of his entry for Amatus Lusitanus' *Centuriae,* a volume of miscellaneous observations, some relating to surgery.

6. Simmler, Josias, 1530-1576. Vita clarissimi philosophi et medici excellentissimi Conradi Gesneri . . . Zürich, 1566.

   Simmler's biography of his friend Gesner is the basis of most subsequent accounts. It is followed by the auto-bibliography Gesner compiled in 1562 for his English friend and fellow-naturalist, William Turner. This contains a section on items as yet unpublished or in preparation.

II. THE PHILOLOGIST

7. Galen. Omnia . . . opera in Latinam linguam conversa . . . Lyons, 1550 [i.e. 1548-1551].

   This collected edition of Galen's works contains Gesner's translation of a brief excerpt from Stobaeus, a Greek anthologist of the 5th (?) century A.D. It purports to be a Galenic summary of Hippocratic doctrines.

8. Aelian. De natura animalium libri XVII. Cum animadversionibus Conradi Gesneri, et Danielis Wilhelmi Trilleri: curante Abrahamo Gronovio, qui et suas adnotationes adjecit. Heilbronn, 1765. 2v.

   It was almost inevitable that Gesner, with his own *Historia animalium* in mind, would apply his philological skills to the editing and translating of this miscellany "On the characteristics of animals." His Greek and Latin edition was first published in 1556.

9. Galen. Omnia, quae extant, in Latinum sermonem conversa . . . Basel, [1561]-1562.

   To this edition Gesner contributed introductory remarks on Galen's life and doctrines, and a list of all those who had edited, translated, paraphrased or commented on Galen, from Aetius of Amida to Vidus Vidius.

10. Cassius Iatrosophista, fl. ca. 200 A.D. Naturales et medicinales quaestiones LXXXIIII. Circa hominis naturam & morbos aliquot, Conrado Gesnero . . . interprete, nunc primum editae . . . [Zürich, 1562].

    This work by an otherwise unknown Greek physician asks and attempts to answer difficult problems in medicine and natural history. Gesner here publishes his Latin version and an edition of the Greek text, the latter dedicated to his former pupil Anton Schneeberger.

11. Dioscorides, Pedanius, of Anazarbos. Εὐπόριστα ad Andromachum, hoc est De curationibus morborum per medicamenta paratu facilia, libri II . . . Strassburg, 1565.

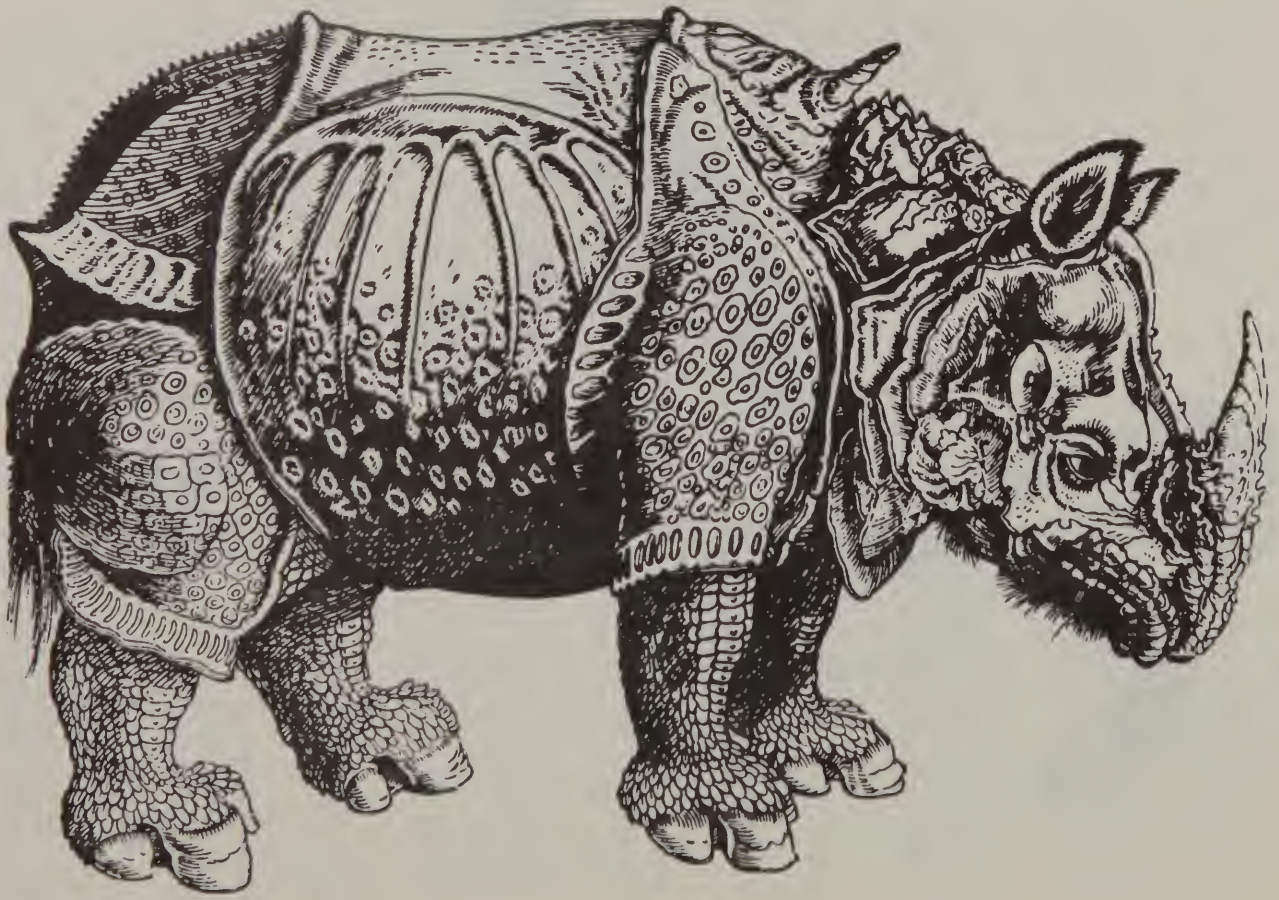
    In an important letter to the reader, Gesner outlines his editorial principles, argues for the work's genuineness (he had earlier suspected its authenticity) and lists similar compilations of "ready remedies" by a host of writers from Apollonius, an author cited by Galen, to Martin Ruland (1564).

12. Mustio. Moschionis . . . De morbis muliebribus liber unus: cum Conradi Gesneri . . . scholiis & emendationibus . . . Basel, 1566.

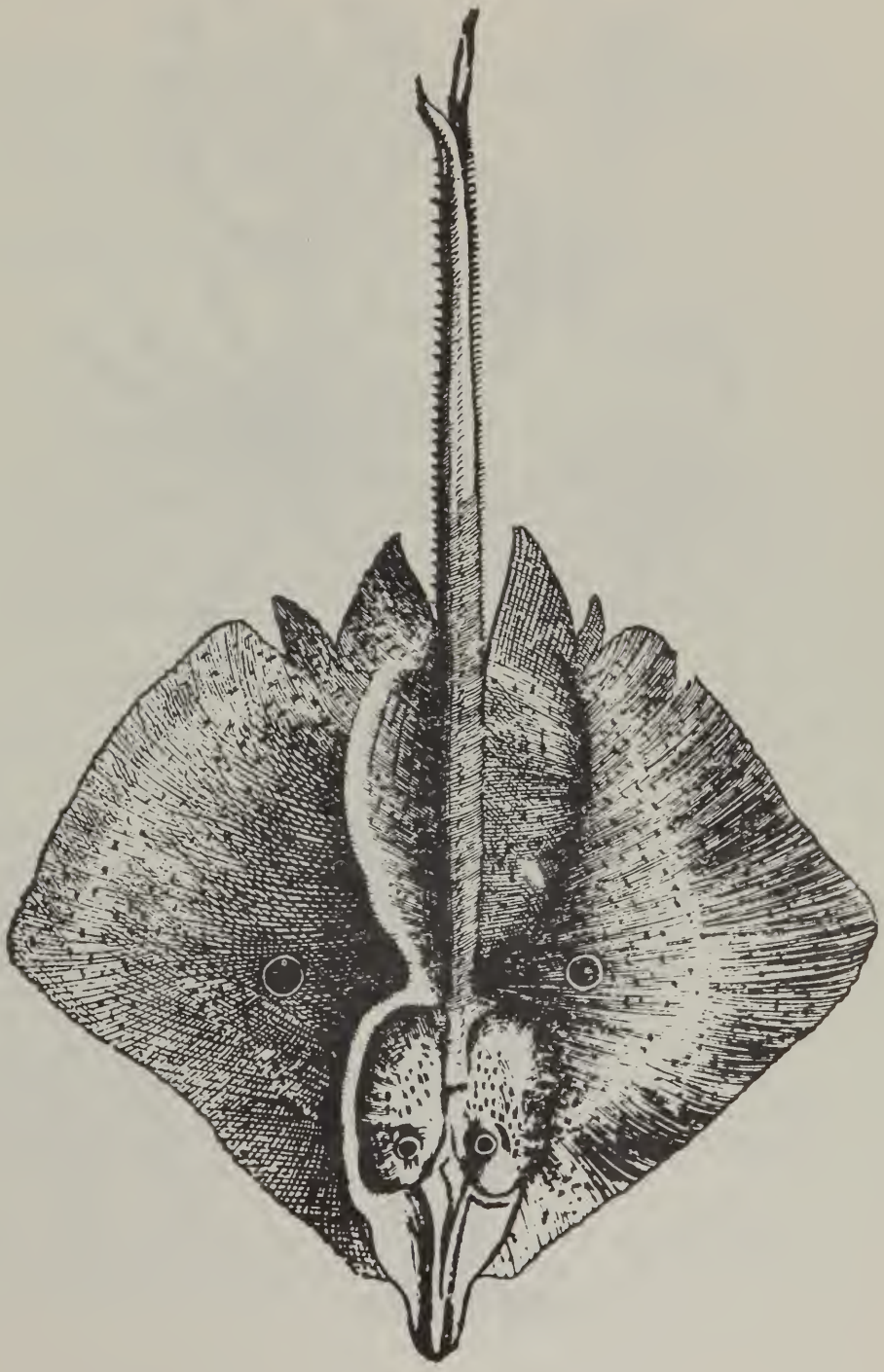
    During a vist to Augsburg, Gesner found in the public library there the Greek manuscript of this work on the diseases of women. Wrongly ascribed to the Greek Moschion, it is in fact a Byzantine rendering of Mustio's Latin paraphrase of Soranus' *Gynaecia*.

13. Gesner, Conrad. Meditationum annotationum et scholiorum lib. V. Nunc recens ex variis Gesnerianae diligentiae relictis schedis et libris . . . collecti . . . dispositi et conscripti per Casparum Wolphium . . . Zürich, 1586.

Stork. Item 15, p. 251



Rhinoceros. Item 17, p. 60



Ray. Item 21, leaf 70^{r}

"Ornithogalon maius et minus". Item 49, leaf 51^{r}

The first four books are largely formal exposition, interspersed with occasional personal reflections by Gesner. The fifth book consists of detailed scholia, demonstrating Gesner's intimate acquaintance with Aristotle and his Greek commentators.

The passage shown contains advice on the reading of Aristotle and a description of some features of his style.

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III. THE ZOOLOGIST

Gesner planned his great *Historia animalium* in six books, but lived to see only four published. Though largely a compilation, based on a reading of over 250 authorities, it nevertheless contains many original observations. It systematically discusses the nomenclature, physical characteristics, habitat, behavior and other aspects of the then known animal world.

The illustrations are noted for their realism.

14. Historiae animalium lib. I de quadrupedibus viviparis . . . Zürich, 1551.

    Typical of the handsome woodcuts included in this volume on viviparous quadrupeds are these figures o. the dromedary and various breeds of dog.

15. Historiae animalium liber III qui est de avium natura . . . Zürich, 1555.

    Gesner in his book on birds described 188 species, of which 65 were unknown to Pierre Belon. On the other hand, 27 birds described by Belon are wanting in Gesner. Several species are mentioned for the first time, notably the wall creeper, the canary, the hummingbird and the alpine sparrow.

16. Icones avium omnium, quae in Historia avium . . . describuntur, cum nomenclaturis singulorum . . . Zürich, 1555.

Shown here on p. 22 (first figure) is the famous representation of the "Waldrapp", for centuries the object of controversy amongst ornithologists, some of whom considered the bird either extinct or fictitious. A species of ibis now found in Egypt, *Geronticus eremita,* it was to be seen in Gesner's day in Switzerland.

17. Icones animalium quadrupedum viviparorum et oviparorum, quae in Historiae animalium . . . libro I et II describuntur, cum nomenclaturis singulorum . . . Ed. secunda . . . auctior . . . Zürich, 1560.

Shown here are the rhinoceros and elephant. The picture of the former is a copy of Dürer's famous drawing, as Gesner acknowledges on p. 61.

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18. Nomenclator aquatilium animantium. Icones animalium aquatilium in mari & dulcibus aquis gentium, plusquam DCC cum nomenclaturis singulorum . . . Zürich, 1560.

Gesner occasionally made use of secondary sources such as Olaus Magnus, whose account of sea monsters is shown here. Gesner warns the reader that Olaus' pictures are based on sailors' tales and not drawn from life. To the left, Faroe islanders cut up a stranded whale; a companion with bagpipes provides music while they work.

19. Historiae animalium lib. V. qui est de serpentium natura . . . Zürich, 1587.

The book on snakes was edited from Gesner's papers by Jakob Carron of Frankfurt am Main. Shown here is an illustration of a sea serpent: the entry on the verso quotes authorities from Aristotle to Rondelet and Belon.

20. Thierbuch . . . durch D. Cunrat Forer . . . in das Teutsch gebracht, und in ein kurtze komliche Ordnung gezogen. Zürich, 1563.

A German translation of the first two books of the *Historia animalium,* on viviparous and oviparous quadrupeds. Shown here is the camel.

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21. Fischbuch . . . von Herrn Conrad Forer . . . ins Teutsch gebracht, jetzt aber an vielen Orthen gebessert. Frankfurt am Main, 1598.

A translation, with some additions, of the fourth book of Gesner's *Historia animalium* (1558). Shown here are various species of ray.

IV. THE BOTANIST

Botany was Gesner's lifelong passion. He worked for twenty years on a *History of Plants* for which he collected specimens and drawings from all over Europe. At his death he had amassed a collection of over 1500 pictures, 150 of which he had drawn himself. These and the accompanying descriptions passed through many hands before they were published in part by C.C. Schmiedel in the eighteenth century. In 1927 some 1300 drawings with valuable notes by Gesner and others were discovered in the University of Erlangen library.

Passages in some of his letters show Gesner realized the importance of flower, fruit and seed in botanical classification. He also clearly recognized the distinction between genus and species.

22. Gesner, Conrad. Catalogus plantarum Latine, Graece, Germanice, & Gallice . . . Una cum vulgaribus pharmacopolarum nominibus . . . Zürich, 1542.

This early essay in botanical nomenclature was compiled during Gesner's tenure of the Greek professorship at Lausanne. It is dedicated to his old teacher, Johann Jakob Ammann, whose love of botany had stimulated Gesner's own.

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23. Bock, Hieronymus, 1498-1554. Hieronymi Tragi De stirpium, maxime earum, quae in Germania nostra nascuntur, usitatis nomenclaturis . . . libri tres . . . nunc in Latinam conversi, interprete Davide Kybero . . . [Strassburg, 1552).

This Latin translation of Bock's *New Kreütter Buch* includes Gesner's bibliography of botanical writers, Greek, Latin, Arabic, medieval and contemporary. Of the last, Gesner says three shine like suns amongst minor stars: Bock, Jean Ruel, and Leonhart Fuchs.

24. Gesner, Conrad. De raris & admirandis herbis, quae . . . lunariae nominantur . . . Ed. 2. emendatior . . . Copenhagen, 1669.

This discussion of luminescence was the first ever published. It originally appeared in 1555 and is here reprinted as an appendix to Thomas Bartholin's account of the phenomenon, *De luce hominum & brutorum.*

25. Guilandinus (Wieland), Melchior, 1519 or 20-1589. De stirpium aliquot nominibus vetustis ac novis . . . epistolae II. Una Melchioris Guilandini Borussi, altera Conradi Gesneri . . . Basel, 1557.

Gesner's own (proof?) copy with marginal annotations, some cropped by the eighteenth-century binder. Melchior Guilandinus, a Prussian who became head of the botanical garden at Padua, wrote to Gesner on the vexed question of the identity of certain plants. In his reply, Gesner begs to differ from his correspondent and urges him in future to moderate his language, especially with regard to Mattioli: "if you must criticize, castigate the man's faults rather than the man."

26. Gesner, Conrad. Horti Germaniae . . . *In* Cordus, Valerius. Annotationes in Dioscoridis . . . De medica materia libros V. [ed. by Gesner] [Strassburg] 1561.

Includes directions for establishing a botanical garden, a list of such gardens in Germany, Switzerland, Poland, France, Italy and elsewhere, and an alphabetical catalogue of cultivated plants, shrubs, and trees. Gesner describes his own garden on leaf 243^{v} as "very small, but full of various plants."

27. Gesner, Conrad. De stirpium collectione tabulae . . . nunc . . . de novo in usum pharmacopolarum luci d a t a e, per Casparum Wolphium . . . Zürich, 1587.

This general account of plant differentiation and the parts of plants is followed by directions as to when, where and how to collect them. Two lists conclude the volume: the first, in alphabetical order, lists the various species and gives their times of flowering or fructification. The second is a botanical calendar, showing what plants are in flower in any given month.

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28. Gesner, Conrad. Opera botanica. ed. C.C. Schmiedel. Pars prima. Nuremberg, 1751.

Gesner's knowledge of Alpine flora was particularly profound. Figure 1 depicts a rare species of gentian found on 1 August 1564.

Gesner once wrote in a letter: ". . . There are hardly any plants that constitute a genus which may not be divided into two or more species. The ancients describe one species of gentian: I know of ten or more."

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28.1 Portrait of Gesner, signed "B". The verses below describe him as so prolific a writer, that his works constitute a physician's library all by themselves.

29. Opera botanica, ed. C.C. Schmiedel. Pars secunda. Nuremberg, 1771.

Plate 30, fig. 99 shows a Swiss species of wild strawberry. Gesner was one of the first to portray individual parts of plants on an enlarged scale.

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V. THE PHARMACIST

Gesner's interest in pharmaceutical chemistry and the "secret remedies" of alchemists and empirics is evidenced by his *Thesaurus ... de remediis secretis*. This was first issued under a pseudonym in 1552, as Gesner was not entirely satisfied with it. It was very soon translated into English, French, German and Italian. No other work of Gesner's proved so popular.

30. Thesaurus Euonymi Philiatri [pseud.] de remediis secretis, liber physicus, medicus, et partim etiam chymicus . . . Zürich, 1552.

The *Thesaurus* is primarily a treatise on distillation and the use of distillates in medical practice. It describes and illustrates the methods and apparatus then in use. This is a copy of the first edition, presented by Gesner to his friend Guglielmo Grataroli.

31. Thesaurus . . . Zurich, 1554.

The text on p. 317 ff. and the accompanying illustration of a straight-cooler are both derived from book 8 of Girolamo Cardano's *De subtilitate*. Page 316 describes how to extract oils from spices such as cloves, nutmegs, saffron and mace.

32. Thesaurus . . . Lyons, 1559.

Distillation methods using the heat of the sun. The figure on p. 144 illustrates the use of a mirror (D) reflecting the rays of the sun (B) into a vessel (C) containing the matter to be distilled. That on p. 155 shows a variant method, employing crystal balls (A).

33. Tresor . . . des remedes secretz . . . Lyons, 1555.

A French translation of the *Thesaurus* by Barthélemy Aneau. It is open at pages 38-39 which describe and illustrate five of the plants to be distilled: winter cherry, pellitory, hawkweed, hyssop and endive. Winter cherry (Physalis alkekengi L.) is recommended for renal and vesical calculus.

34. Schatz. Ein kostlicher theürer Schatz Euonymi Philatri [pseud.] . . . Neüwlich verteütscht durch Joannem Rudolphum Landenberger . . . Zürich, 1555.

The first figure shows the Arabian Abulcasis' "Woolcondenser": the "Balneum Mariae" illustrated below is a water bath variously used for melting down fats, resin and the like, for extracting perfumes from flowers with fats and oil, and for chemical work.

35. Tesauro . . . de rimedii secreti . . . Tradotto . . . per m. Pietro Lauro . . . [Venice, 1556].

These figures represent various types of alembic.

36. The treasure of Euonymus . . . Translated . . . by Peter Morwyng. London, 1559.

This passage describes and illustrates one method of obtaining "oil of vitriol," i.e. concentrated sulphuric acid (H_2SO_4).

37. Euonymus. Çonradi Gesneri . . . de remediis secretis, liber secundus . . . [Zürich, pref. 1569].

This second part of the *Thesaurus* was posthumously edited by Gesner's literary executor, Caspar Wolff. The illustration on leaf 186^{V} shows a still with water cooler (G), used for distilling aqua vitae.

38. The newe jewell of health . . . Faithfully corrected and published in Englishe, by George Baker, chirurgian. London, 1576.

Page 216 shows a coil condenser commonly called a "serpentina." Vannoccio Biringuccio, in book 9 of his *Pirotechnia* published in 1540, gives probably the first picture of this device.

39. Quatre livres des secrets de medecine, et de la philosophie chimique. Faicts francois par M. Jean Liebaut . . . Paris, 1579.

This French version of part 2 of the *Thesaurus* was first published in 1573. Shown on leaf 20^{V} is a new type of distillation involving circulation or "reboiling." Three furnaces are shown. That on the right contains a fire of the "third" degree: the middle, a fire of the "second": and the far left under a "balneum mariae," a very small fire. Provided the fires were well regulated, one could obtain a fairly pure distillate.

VI. THE PHYSICIAN

Gesner practiced medicine in his native city Zürich for twenty-four years after obtaining his M.D. at Basel in 1541. From 1554 he was the senior city physician. His practice was not a large one and he usually had leisure for his many other interests. Nevertheless, medicine bulked large in his life and thoughts.

The books exhibited in this case reveal his particular interest in therapeutics.

40. Joannes Actuarius, 13th cent. . . . De medicamentorum compositione. Joan. Ruellio interprete. Adjecimus quoque in medicinae candidatorum gratiam Succidaneorum medicaminum tabulam per Conradum Gessnerum . . . Basel [1540].

In his preface to the reader, Gesner explains the importance of knowing what drug may be substituted for another, when one proves unavailable. He then prints some classical lists of substitute medicines.

41. Gesner, Conrad. Apparatus et delectus simplicium medicamentorum . . . Omnia nunc primum aedita . . . Lyons, 1542.

Gesner edited this compilation on simples during his years at Lausanne. He had it printed at Lyons, where he stayed briefly in January 1541, on his way back from his abortive visit to Montpellier. A few months later, he had obtained his M.D. in Basel.

42. Gesner, Conrad. Compendium ex Actuarii Zachariae libris De differentiis urinarum, judiciis [etc.] Zürich, [1541].

Joannes Actuarius, a Byzantine physician, wrote a prolix treatise on uroscopy. Gesner here publishes his epitome of it together with a collection of Galenic prescriptions for various diseases. He dedicates the epitome to a Spanish physician and botanist he had met at Montpellier, Petrus Jacobus.

43. Brasavola, Antonio Musa, 1500-1555. Examen omnium catapotiorum vel pilularum . . . [Basel, 1543].

Gesner's alphabetical list of purgative medicines, etc., is found on p. 143-166.

44. Gesner, Conrad. Enchiridion rei medicae triplicis . . . Zürich, 1555.

This collection of various treatises on pulse-lore, uroscopy, internal medicine and regimen in fevers was edited by Gesner, who dedicated it to his friend Achilles Pirmin Gasser.

45. Gesner, Conrad. Sanitatis tuendae praecepta . . . Zürich, dedication dated 28 Dec. 1555.

A collection of excerpts from classical and other authors, aimed particularly at those who lead sedentary lives. Gesner adds a warning about the evils of overindulgence and the immoderate use of venesection. This is Gesner's presentation copy inscribed to Johannes Baptista Haintzelius, an Augsburg senator.

46. Gesner, Conrad. The practice of the new and old phisicke . . . Newly corrected and published in English, by George Baker . . . London, 1599.

An English version of part 2 of Gesner's *Thesaurus ... de remediis secretis*. Other editions of this popular work are shown in case V. Gesner's interest in pharmaceutical chemistry had always a practical end in view: the curing of the patient. Often, as this book and his letters prove, he tried out new remedies on himself.

VII. THE FRIEND

Gesner's warm personality made him many friends. They showed their appreciation by helping him in his scientific work. In return, Gesner expressed his gratitude by naming them in his writings or dedicating treatises to them.

Recently, the National Library of Medicine acquired through the generosity of the Robert Tracy Gillmore and Emma Wheat Gillmore bequest, Gesner's *Liber amicorum* for 1555–1565. Here we find over 200 autographs of sixteenth-century scientists, savants, and students. Often, Gesner has added valuable notes about the contributions they had made, their interests, and their attainments.

The *Liber* is shown here, together with some of Gesner's published correspondence, and representative works by a few of those who signed his book.

47. Liber Amicorum, 1555–1565. This small book (97 x 77 mm.) contains 227 autographs of Gesner's friends and acquaintances. Typical of the entries are those shown here: John Dee was a celebrated English astrologer and mathematician; Leonhart Rauwolff, a physician, explorer and botanist, after whom "Rauwolfiana" is named. Below their signatures, are comments in Gesner's minuscule hand. Of the first, Gesner notes among other details that he was a Paracelsan; of the latter, that he was returning from Italy in the company of Jean Bauhin.

48. Gesner, Conrad. Epistolarum medicinalium . . . libri III . . . Zürich, 1577.

Gesner corresponded with a vast number of physicians and natural scientists all over Europe, usually in Latin, occasionally in Greek. This is a letter to the Augsburg physician Adolph Occo. In it, Gesner prescribes his "oxymel" for asthma: the dose should not exceed one or two drachms. A special treatise included at the end gives the complicated recipe.

49. Bauhin, Jean, 1541-1613. De plantis a divis sanctisve nomen habentibus . . . Additae sunt Conradi Gesneri . . . epistolae hactenus non editae a Casparo Bauhino . . . Basel, 1591.

Gesner's letters to his friend Jean Bauhin are full of details concerning their fruitful cooperation. Both were keen botanists and exchanged specimens.

50. Alessandrini, Giulio, 1506-1590. De medicina et medico, dialogus . . . Zürich, 1557.

The author of this book was physician to three emperors and used his position at the Viennese court to secure Gesner's ennoblement in 1564. Gesner contributed the Greek verses on the title page here shown.

51. Erastus, Thomas, 1524-1583. Disputationum de nova Philippi Paracelsi medicina pars altera . . . [Basel], 1572.

The author was a philosopher, theologian and physician. Apart from his contributions to church dogma ("Erastianism"), he is noted as an implacable opponent of Paracelsus.

52. Etschenreutter, Gallus, fl. 1561-1571. Aller heilsamer Bader und Brunnen Natur, Krafft, Tugendt, und Würckung, so in Teutschlanden bekandt und erfahren. Strassburg, 1571.

The author visited Gesner on 7 November 1561 on his return from Bologna, where the previous month he had obtained his M.D. This is the first edition of his popular book on German baths, with a picture of mixed bathing on the title page.

53. Ewich, Johann, 1525-1588. De officio fidelis et prudentis magistratus tempore pestilentiae. Neustadt an der Haardt, 1582.

The author, a native of Hörstgen in the former duchy of Cleves, visited Gesner in October 1557 on his return from Italy and promised Gesner some Greek verses for his book on fishes, published the following year.

This book defines the duties of civic authorities in time of plague.

54. Gabelkover, Oswald, 1539-1616. The boocke of physicke . . . Dorte, 1599.

Compiled at the instance of his master, Duke Ludwig of Württemberg, Gabelkover's collection "out of all the experiments, of litterate, and allso illiterated, highe, and laye persons" was soon translated from German into Dutch and English. It was first published under the title *Nützlich Artzneybuch* in 1589.

54.1 Portrait of Oswald Gabelkover, aged 70. Engraved by Lucas Kilian in 1617.

55. Gasser, Achilles Pirmin, 1505-1577. Aphorismorum Hippocratis methodus nova, ab Achille P. Gassaro . . . primum quinque libris distincta: deinde vero Conradi Gesneri . . . opera illustrata. St. Gall, 1584.

Gesner revised and completed Gasser's topical rearrangement of Hippocrates' *Aphorisms*. Appropriately, in view of their great friendship, Gasser was the first to sign the *Liber amicorum* on the occasion of Gesner's visit to Augsburg in July 1555.

55.1 Portrait of Achilles Pirmin Gasser, aged 72. Unsigned.

56. Grataroli, Guglielmo, 1516-1568. De vini natura, artificio et usu, deque re omni potabili . . . Huic addita quedam opuscula ejusdem authoris . . . [Strassburg, 1565].

A Protestant refugee from Bergamo who settled in Switzerland, Grataroli wrote and edited a great number of books on medicine, natural science and the occult. His inscription in the Liber does not speak well for contemporary medical practice: "Many are physicians in name and fame, few in reality . . ."

56.1 Portrait of Guglielmo Grataroli, singed "B". His death date is here given as 1566.

57. Jordán, Thomas, 1539-1586. Knijha o wodách hogitedlných neb teplicech Morawských . . . Olomouc, 1580.

This work by a prominent Moravian epidemiologist, botanist and balneologist analyzes the medicinal properties of his native country's springs. The portrait of the 42-year old Jordán is dated 1581, though the title page and preface are both dated 1580.

Jordán signed the *Liber amicorum* in October 1562, when en route for Padua, to complete his medical education.

58. PHARMACOPOEIA, seu medicamentarium pro rep. Augustana. Cui accessere simplicia omnia officinis nostris usitata, & annotationes . . . ab Adolpho Occone . . . denuo recognita. [Augsburg, 1574].

Adolph Occo (1524-1606) compiled the Augsburg pharmacopoeia in 1564: it was the second official publication of its type. This is a later revised edition. Occo and Gesner frequently corresponded.

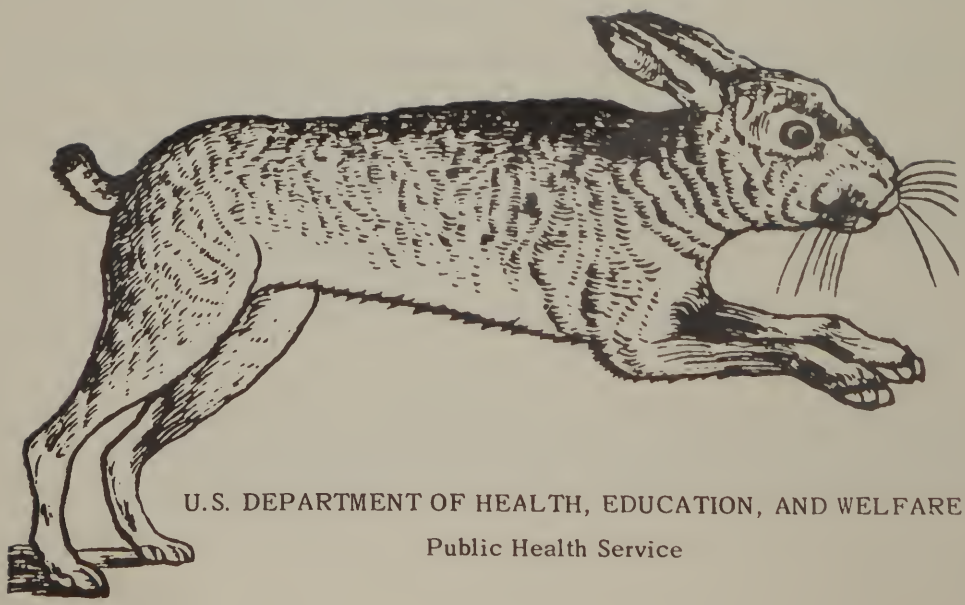
58.1 Portrait of Adolph Occo, aged 70. Done from the life by "D.C." (i.e. Dominik Custos?) in 1594.

59. Pena, Pierre, fl. 1535-1605. Nova stirpium adversaria . . . Antwerp, 1576.

This is a companion volume to the *Plantarum seu stirpium historia* (1576). Pena and his companion Jacques Raynaudet (Reginaldus) stayed a few days with Gesner in June 1564. Gesner praises the two men's knowledge of botany.

60. Platter, Felix, 1536-1614. De corporis humani structura et usu . . . [Basel] 1583.

The author is better known as a pioneer psychiatrist than as an anatomist. All but plates 2 and 3 of the 50 plates in this book were copied from Vesalius' *Fabrica:* plate 3 includes skeletal figures of child and embryo.



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